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ABSTRACT

This paper traces the past and recent controversy concerning the teaching of evolution/creation in the schools. The first section of the paper discusses the opposition of Christian fundamentalists to evolution, going back to Charles Darwin's 1859 "Origin of Species." Covered also are science curriculum revisions following Sputnik, up to the 1981 adoption of equal time laws in Arkansas and Louisiana. In this section the January 5, 1982, ruling of Federal District Judge William R. Overton, declaring Arkansas's 1981 equal time Evolution/Creation teach law unconstitutional, is analyzed. The second section of the paper summarizes anti-creationist arguments by scientists and others. One argument is that creationists use subterfuge to supplant evolution with state-enforced Biblical teaching. The paper concludes with suggestions to educators on how to counter the arguments and actions of creationists. Arguing that the creationist effort is really a political rather than a scientific issue, the author suggests that educators need to resist lawmakers' efforts to dictate curriculum, to have ready access to the legal directives guiding state and local school unit teaching about religious or other controversial subjects, and to organize an active procedures committee for the purpose of dealing with political pressures on the curriculum. A list of professional organizations that have spoken out on the evolution/creation controversy is included. (NE)

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Evolution/Creation Teaching on Trial: Implications for Educators

By Franklin Parker

Many Protestant fundamentalists have long viewed evolution teaching in public schools as contributing to America's moral decline. In recent years, fundamentalists calling themselves creationists have campaigned for state-enforced Genesis-based creation to be taught whenever evolution is taught in public schools. The intent, they say, is to restore morality and thus help reverse rising crime, drug use, abortion, homosexuality, and other ills of American society. To accomplish this, they have introduced equal time evolution/creation bills in over 40 state legislatures and in the U.S. Congress. The Congressional bill would give creationists equal research funds and equal time whenever evolution lectures occur in national parks and museums.

Little known are creationists' considerable gains made in their long anti-evolution, anti-science campaigns, which climaxed in 1981 when Arkansas on March 19[1] and Louisiana on July 21[2] became the first two states to pass equal time laws. Both were challenged by the American Civil Liberties Union (ACLU). Even more determined after Federal District Judge William R. Overton's January 5, 1982, decision declaring the Arkansas law unconstitutional,[3] creationists were pleased when the Mississippi Senate approved a similar bill that same day. They fully expect to uphold Louisiana's law in a challenge trial set for spring, 1982.

Opposing educators, scientists, and main line church leaders, late to organize, see creationists' goal--to reverse America's moral

decline through fundamentalist religion--as at best naive; their circumvention of church-state separation as unconstitutional; their contrived reinstatement of religion in public schools as dangerous; their attacks on evolution and science for favoring a man-centered rather than a God-centered worldview as simplistic; and their deliberate misconstruing of science as consciously weakening science and imperiling our future.

Creationist leaders were critical of state Attorney General Steve Clark's defense of the Arkansas law during the ACLU-led challenge trial, December 7-17, 1981. Perhaps wanting to avoid the sideshow that marked the 1925 Scopes trial in Dayton, Tenn., Clark declined giving defense lead to two of the best creation lawyers in the country. When the ACLU filed suit against the Arkansas law, he said he had qualms about the law's constitutionality and about the legislature's "taking over the job of setting subjects to be taught," but he would defend the law "because that's my job."[4] Said the head of the Arkansas Creation-Science Legal Defense Fund, "The handling of this case was very disappointing," but "that doesn't make our cause a hopeless case." Pointing to the pending ACLU challenge trial in Louisiana, he said that the two leading creation lawyers Clark disdained using will "make points of law Clark didn't even comprehend in this case."[5] The Louisiana law, said that state's attorney general:

> requires only the teaching of facts that
> point to creation and does not say what facts.
> The Arkansas law mixes science and religious teaching.
> Louisiana's law does not.[6]

Little daunted by the Arkansas defeat, creationists gloated over national publicity that promised to swell their Louisiana legal

defense funds:

> The... importance of the creation/evolution issue is finally becoming widely recognized. The leading scientific and educational societies have been marshalling their forces for combat against the creationists. Bitter attacks on creationism have been published in most journals and newspapers, especially those of overtly humanistic commitments.[7]

Although many believe ACLU's defeat of Arkansas's equal time law will be repeated in Louisiana, creationist leaders seem eager for battle and expect to win in Louisiana.

Judge Overton's January 5, 1982, 38-page opinion clearly exposed creationists' strategy and motives: that the cleverly worded Arkansas equal time bill was a smokescreen for teaching religion in public schools; that creation "science" is not science but disguised religion, that creationists' stress on the "two-model approach" is meant to exploit Americans' fairmindedness; and that one intent of state-enforced Genesis-based creation teaching is to weaken the evolution content of science, seen as part of "secular humanism" responsible for America's ills.[8]

Judge Overton traced the origin of fundamentalism to evangelical Protestant reaction to modernism and change, especially reaction to Charles Darwin's Origin of Species, 1859, which offered evidence that all life evolved gradually over millions of years by natural selection as better adapted life forms survived and less well adapted ones died out.[9]

Disliking Darwinian evolution for casting doubt on divine creation, American religionists were further upset by largely German late 19th century Bible scholars' evidence that the Bible was written by mortals at different times and places and included some myths and possible forgeries.

Most people accepted Darwinian evolution, science, higher Bible criticism; lived secular lives under secular governments; and still remained religious. Some evangelical Protestants, however, believing in Christ's second coming, held annual Bible conferences to combat rising secularism. A famous 1895 Bible conference in Niagara, N.Y., issued a clear affirmation of Christian doctrine: Bible inerrancy, Christ's divinity, virgin birth, absolution for man's sins, resurrection, and second coming. This affirmation, 3,000,000 copies of which were distributed free in a pamphlet series called The Fundamentals, 1910-1915, largely inspired the 1920s anti-liquor Prohibition and anti-evolution teaching laws. Widely read speeches by fundamentalist populist politician William Jennings Bryan (three-time Democratic candidate for the U.S. Presidency), helped introduce 37 anti-evolution teaching bills in 20 states. Five states passed them, including Arkansas and Tennessee. Most Tennessee legislators felt they had to vote for the anti-evolution bill in March 1925 in order to be re-elected. The governor who signed it said, "Nobody believes that it is going to be an active statute."[10]

Some friends in Dayton, Tenn., thinking that an ACLU test case in Dayton would put their town on the map, got high school science teacher John Thomas Scopes, 24 and unmarried, to agree to be arrested and tried. Fundamentalist William Jennings Bryan, who led the state's

prosecution, clashed with agnostic Chicago lawyer Clarence Darrow of the ACLU defense in the much publicized trial. Irritated by the judge's apparent bias, Darrow practically asked for a guilty verdict so that he could appeal to a higher court. Scopes was found guilty and fined (the $100 fine was later revoked on a technicality).

Fundamentalists thus won the Scopes trial and also won educationally. Publishers, authors, and teachers were frightened. Evolution was downplayed. The textbook Scopes had used, George William Hunter's Civic Biology, in its 1926 revision omitted all mention of evolution. A study of biology textbooks noted:

> Self censorship exercised by the New York-based publishing industry...shaped the content of high school biology courses for 35 years following the Scopes trial....Publishers and authors feared that a good treatment of evolution meant the loss of the southern market--a fear which seems to have been justified.[11]

This near elimination of evolution in biology textbooks lasted until the post-Sputnik curriculum revisions when the National Science Foundation (NSF) financed the new biology (1958). By 1963 the Biological Sciences Curriculum Study (BSCS) had three biology textbook versions based on evolution in use in the nation's schools.

This BSCS reinstatement of evolution in biology textbooks helped provoke creationists' ire and stimulate their activity and growth. Another factor that determined their current drive was the 1968 Epperson v. Arkansas U.S. Supreme Court case. Arkansas in 1929, like Tennessee in 1925, passed an anti-evolution teaching law which remained in force until a legal challenge by Little Rock biology teacher Susan Epperson led

the U.S. Supreme Court in 1968 to declare Arkansas's 1929 law unconstitutional. Convinced that they could not legally dislodge evolution teaching, creationists seized on an "equal time" strategy that could win by appealing to Americans' sense of fair play.[12] The final spur that convinced creationists that "equal time" strategy would succeed was a partial such victory in California under conservative officials, Governor Ronald Reagan and Superintendent of Instruction Max Rafferty.

In that favorable political climate, creationists got California's school board to amend the state's science teaching guidelines in 1969 to require equal time evolution/creation teaching. Although California scientists were able to reverse this decision under Democratic Governor Jerry Brown's (1974) less conservative state school board, partial victory whetted creationists' appetites. To win California, which uses ten percent of all U.S. textbooks, was to win the nation. A Science magazine author explained:

> What is 'good' for California is likely to become 'good' for the rest of the nation....Unless publishers are prepared to produce special California editions--and they probably are not--the standard set for California will... become the standard for many other states.[13]

Creationists were also encouraged when fundamentalists largely won a 1974-75 campaign around Charleston, W. Va., against alleged dirty textbooks.[14] More encouragement came when Congress delayed NSF's 1975 funding because fundamentalists objected to an NSF-financed 6th grade social studies course, "Man: A Course of Study," for describing such Eskimo customs as wife swapping, incest,

cannibalism, and robbery.[15] Encouraging too were radio and TV evangelists' new wealth and influence, the religious right's victory in helping elect conservative President Ronald Reagan, and his pre-election pro-equal time statement to fundamentalists in Dallas, Texas, August 22, 1980. He said about evolution:

> It is a scientific theory only, and it is not believed in the scientific community to be infallible as it once was believed. But if it is going to be taught in the schools, then I think the Biblical study of creation should also be taught.[16]

As President, he expanded this sentiment before the Conservative Political Action Conference on March 20, 1981:

> We do not have a separate social agenda, a separate economic agenda, and a separate foreign agenda. We have one agenda.... We seek to protect the unborn, to end the manipulation of school children by utopian planners and permit the acknowledgment of a Supreme Being in our classrooms.[17]

Above all, creationists emerged, as have textbook censors, the Heritage Foundation, the Moral Majority, and others of the fundamentalist right, in reaction to the troubles of our time. A writer on the West Virginia textbook controversy expressed it as follows:

> The country is experiencing a religious crusade as fierce as any out of the Middle Ages....Our children are being sacrificed because of the fanatical zeal of our fundamentalist brothers who claim to be hearing the voice of God. People are confused and angry about everything

> from marijuana to Watergate. Feeling helpless and left out, they are looking for a scapegoat, eager to exorcise all that is evil and foul, cleanse or burn all that is strange and foreign. In this religious war, spiced with overtones of race and class, the books are an accessible target.[18]

Substitute "evolution" for "the books" and one begins to see why the evolution/creation battle rages. A recent barrage of rapid changes, mainly for the worse, has put us off balance. One can understand why the current conservative surge with simple religious answers to complex moral problems might have appeal.

To explore further why the evolution/creation battle rages, these questions come to mind. Was there a creationist conspiracy in Arkansas? Why was Arkansas chosen? How can Genesis-based creation be passed off as science today? Why are some Americans, if not attracted, at least tolerant of creationism? How does "equal time" hurt science teaching? What tactics and subterfuge do creationists use to supplant evolution with state-enforced Biblical creation teaching? Finally, what can educators do to counter creationists' successes?

Judge Overton's analysis offers the following on the conspiracy charge. Fundamentalist Paul Ellwanger of Anderson, S.C., organized and heads two organizations: "Citizens for Fairness in Education" and "Citizens Against Federal Establishment of Evolutionary Dogma." An anti-evolution activist, he is by profession an X-ray technician without training in law or science. Knowing that evolution cannot be barred from classrooms (because of the 1968 Epperson v. Arkansas Supreme Court decision), Ellwanger, helped by creationist

lawyer Wendell E. Bird, developed model bills omitting references to religion or God in order to withstand First Amendment constitutional challenges. He also used "balanced treatment" wording to appeal to Americans' sense of fair play in presenting both sides. Ellwanger insisted that non-ministers push the bills in order to avoid the taint of religion in the public mind. He urged supporters not to present the bills in a religious framework. He wrote a woman lobbyist for the bill not to mix "creation-science and creation-religion."[19]

Ellwanger sent his model bill to, among others, fundamentalist minister W.A. Blount, chairman of the Greater Little Rock Evangelical Fellowship. A minister member of that Fellowship gave the bill to Carl Hunt, business associate of Senator James L. Holsted, a "born again" fundamentalist, who introduced the bill into the Arkansas Senate. It was passed after a few minutes without debate or advice from educators or scientists or the attorney general. In the House, the bill was referred to the Education Committee for a 15-minute perfunctory hearing and was passed with little debate and no modification. It was signed by fundamentalist Governor Frank White, who owed his election to the Moral Majority and who later admitted that he had not read the bill. Judge Overton pointed out that all involved--Ellwanger, Blount, Hunt, Holsted, and White--were motivated by anti-evolution, pro-religious beliefs. A later investigator also found such close connections among those who got the act passed as to suggest strongly a conservative conspiracy.[20]

Arkansas was chosen, explained Little Rock's ACLU Executive Director Sandra Kurjiaka, because most legislators are from rural

districts, are not overly "concerned about the constitutionality of laws they pass," and believe that a vote against creationism "would be a vote against God." Only Representative Michael Wilson, concerned about the bill, took Arkansas Methodist Bishop Kenneth W. Hicks to the hearing but found that "they would not allow the bishop to speak against it."[21]

Kurjiaka added:

> It was amazing. I've never seen a piece of legislation go through that fast. It was very carefully orchestrated for the last days of the session, so that there would not be any opposition to it....They succeeded in passing it without anyone watching. And now most members are very embarrassed that they voted yes for it....I'm not sure there's anybody beyond 50 or so members of the Moral Majority in the entire state who want this thing.[22]

Judge Overton dealt with "creation science" as not being science but, instead, a misnomer contrived to mislead. Creationism as the sudden origin of the universe, energy, and life depends on supernatural intervention and is not testable, he wrote. Creationist belief in separate ancestry for man and ape is an assertion without scientific proof, he held. That the earth's geology and fossil remains were caused by a world flood in Noah's time, he wrote, has not been proved by natural evidence. The estimate of a 6,000-year-old earth is based, not on science, but on the genealogy of the Old Testament, he said. Creation science, he concluded, is not science.[23]

Why many Americans accept "creationism," as it was first called, and "creation science," as later named, remains something to ponder.

One conjecture is that in times of stress people are gullible and superstitions easily surface, as shown by widespread belief in astrology and UFOs.

Skilled grassroot campaigns also help explain the attracting to creationism of Americans already distraught over sex education, abortion, cohabitation, women's militancy, and similar trends. Creationist strength rose after BSCS reinstated evolution in biology teaching and after fundamentalists' dismay over 1962-63 U.S. Supreme Court decisions declaring public school prayer and Bible reading unconstitutional.[24]

An early rallying book was The Genesis Flood, 1961, written by creationists hydraulic engineer Henry M. Morris and Missouri Synod Lutheran theologian John K. Whitcomb, Jr.[25] Having this major creationist textbook induced ten disaffected members to separate from the American Scientific Affiliation (ASA), a 1941-formed evangelical Christian group. Dissatisfied with ASA's growing acceptance of evolution, the ten formed in 1963 the Creation Research Society (CRS), whose constitution asserts the inerrancy of the Bible, opposition to evolution, and requires voting members to affirm the scientific truth of Genesis.

In 1964 the Bible Science Association (BSA) was formed by Missouri Synod Lutheran pastor Walter Lang to bring fundamentalists' "scientific" arguments to the public. In 1970 BSA member Nell J. Segraves,[26] her son Kelly, and others organized the Creation-Science Research Center (CSRC) to prepare "creation-science" literature for adoption in public schools. CSRC was organized along with and on the campus of Christian Heritage College in San Diego, an

unaccredited fundamentalist school sponsored by independent Scott Memorial Baptist Church, whose Baptist radio preacher Tim LaHaye heads California for a Biblical Morality, and who in 1979 co-founded the Moral Majority with the Rev. Jerry Falwell. In 1972, differences over tactics led the Segraves to remove the CSRC from Christian Heritage College (CHC), which then set up the Institute for Creation Research (ICR) as its new research division.[27]

Despite slight differences, these organizations initiate and coordinate political pressure to impose "creation science" on public schools, with the ICR most actively producing teaching materials and developing "equal time" and "balanced treatment" model bills. Paul Ellwanger of Anderson, S.C., whose success in Arkansas and Louisiana has been recounted, relied heavily on ICR for education, "scientific," and legal advice in disemminating these model bills to state legislatures.

ICR Director Henry M. Morris's anti-evolution rhetoric:

> The evolutionary belief that the world has slowly developed over vast aeons of time and that man himself is merely an evolved animal, all without the need of a creator, is the root cause of man's present distress and perplexity.[28]

He also wrote:

> This God-rejecting, man-exalting philosophy of evolution spills its evil progeny, materialism, modernism, humanism, socialism, fascism, communism, and ultimately satanism--in terrifying profusion all over the world.[29]

ICR's Associate Director Duane T. Gish echoed this criticism: "Most of today's deadliest philosophies, such as anarchism, amoralism, racism, totalitarianism, and imperialist, have been based on the Darwinian concepts of struggle and survival."[30]

Regarding demographics, some observers sense a South-against-North regional conflict in the creation/evolution battle and also rural-versus-urban and old settler-versus-newcomer antagonisms. Anti-evolution teaching laws of the 1920s flourished in the southern Bible belt, while Baltimore Sun reporter H. L. Mencken's ridicule of fundamentalists at the Scopes trial reflected northern disdain. Little Rock press and city sophisticates generally opposed while small town and rural people mainly favored Arkansas' creation law. Some also see a class struggle, as Arkansas-born blue-collar worker and farmer creationists vent their frustrations at outside Johnny-come-lately mainly evolutionists who have moved into positions of local power.[31]

Naturally glad but cautious in reacting when Arkansas's equal time law was declared unconstitutional, a retired biologist wrote:

> As in the California Segraves trial, the creationists got what they wanted: publicity and a polarization of the populace. This issue will be won or lost not in the courts or in the legislatures but in the minds of ordinary folk. Our big job is one of education. (Also, politics).[32]

As if agreeing, Senator James L. Holsted said of his defeated bill: "I think I had a victory because the idea and the spirit behind the law was to get people aware of creation science. That was my intention in the first place."[33] Another account had him saying, "It's just starting, all the hoopla and publicity. That's what I

wanted. I feel like we really won, because people are talking about it."[34]

"Equal time" for creationism has no place in science teaching, wrote University of California (Riverside) biology Professor John A. Moore, who opposes equal time because "scientific matters are not resolved by democratic procedures." He explained:

> Democracy did not give us the laws of gravitation, the laws of thermodynamics, or Mendel's laws of inheritance. In a science class, creationism is not--indeed cannot be--a part of science because its statements are...based on revelation, not a careful marshalling of data by observation and experimentation.[35]

"Creationism," he said, "is religious dogma; evolution is scientific theory."

> Thus, scientists should oppose the teaching of creationism as science, though no one should object to it or any creation myth being taught as part of the history of religion.[36]

"Experience," he said, "has demonstrated clearly that there is no way to deal, in a scientific way, with determined creationists." "This is a political debate; it is not a scientific one." When one views the creation-evolution battle as political, not scientific, he continued, one realizes the difficulty in dealing with it in our democracy, where few political questions are settled for all time.[37]

Similarly, at a January 4, 1982, meeting of the American Association for the Advancement of Science, creationism was called a political movement which must be met with political action as well as with scientific argument.[38]

Of creationists' demand for equal time, David Black wrote, "They developed a new strategy which appealed to [liberals'] sense of fair play: equal time. Biology teachers would be forced to divide time between creationism and evolution, thus weakening science while emphasizing the Bible. He called the creation movement "a slick, well-packaged campaign, run by fundamentalists who are trying to use conservatism as a trojan horse to smuggle the Bible back into public schools." They have chosen to fight evolution, he said, because to them it "denies the unique position of man as the child of God and thus threatens the central premise of their religion."[39]

Creationists' strategies and subterfuges, apparent to the discerning, often succeed with uninformed lay persons. Long ignored (but no longer) by scientists and educators, creationists have gone over their heads to influence sympathetic legislators, school boards, and education department members. Well-financed creationist leaders now have a Madison Avenue polish unimagined by the 1920s fire and brimstone anti-evolutionists. Knowing the unpopularity of being anti-anything now, creationists project a positive "scientific" creationism which has carried them far despite the setback in the Arkansas trial. That trial showed that legislating curriculum infringes on educators' academic freedom and opens the door to all kinds of outside interference with what, how, and when subjects are taught.

Evolution, cell theory, germ theory, chromosome theory of inheritance, and atomic theory in physics were never mandated for schools. Instead, they grew in acceptance out of their respective scientific disciplines. Judge Overton saw that for a legislature

to mandate creation teaching would give this religious subject a privileged, unconstitutional place in the curriculum and set a dangerous precedent for other similar abuses.

Another problem with legally requiring creation teaching is that relevant textbooks and other learning materials are available from only one creationist publisher. The result is a perilous situation in which a legislature or school board mandates a pressure group's anti-evolution position and in effect also mandates purchasing teaching materials from that same group. Several biology and other science teachers in Arkansas testified for the ACLU that, as conscientious educators, they could not use creationist-produced pseudo-scientific material. They said that their only way out, if the Arkansas equal time law had been upheld, would have been not to teach evolution at all so that they would not then be forced to use creationists' essentially religious materials.[40] Science, students, and the nation would then lose. Creationism, anti-intellectualism, and "know-nothingism" would win.

Creation Life Publishers of San Diego reported over $350,000 profit from sales of creationist materials in 1979 alone, only a token sum if state-mandated equal time had been upheld. Also, creationist organizations have split and recombined in strange interlocking ways, often using the same San Diego address. One wonders if possibly vast publication profit is not a motive of some creationist leaders.

A Georgia state school officer estimated that to implement equal time there would cost over $4.8 million--$1.5 million for textbooks, $2.8 million for in-service staff development, $226,000 for instructional aids, and $320,000 for pre-service teacher training--

with Creation Life Publishers of San Diego the only textbook source.[41] A Louisiana science education official estimated costs up to $7 million to implement equal time there the first year of operation.[42] Big money is at stake. Creationist leaders, who know this, obviously want to keep the evolution/creation battle going.

In that battle, creationists win by default as their well-funded full-time staffs focus on learning materials, programs, and debates (not only in the U.S. but in Canada, Australia, South Africa, Hong Kong, and elsewhere worldwide). In contrast, not one U.S. scientist is funded full time to answer their claims and to promote evolution and science. Creationists relish public debates and court trials because the publicity wins converts plus over $500,000 a year in donations.[43] They appeal for funds in the name of God to combat "communistic evolution,"[44] stating flatly (to use ICR Director Henry M. Morris' words) that "Evolutionary philosophy is the foundation of atheism."[45]

While the theistic approach is useful in fund raising, the strategy is to drop "God" and "religion" when presenting creationism as "scientific" for class use. As ICR Director Morris states, "Creationism can be approached by keeping the Bible and religion out of it altogether."[46]

Creationists deliberately cloak their religious intent and materialistic goals in such terms as "science," "research," and "theory." The Institute for Creation Research, for example (whose name is a contradiction in terms), succeeds in planting in the minds of laymen the image of a research institution. Unfortunately, few laymen read those respected scientific and other scholarly journals

now publishing exposés of creationist distortions of science and misrepresentations of scientists' writings and speeches.

Legalized equal time would raise other problems; for example, for public teacher education. Required to teach "creation science" equally with evolution, teachers would need to be trained to present a fundamentalist version of Genesis. Inevitably, under legalized equal time, creationists would press to control not only textbooks but also public teacher education as well. Constitutional separation of church and state would again be threatened and parents of all but the minority of fundamentalist children would be outraged to have their children exposed to "creation science."[47]

What can educators, parents, and other concerned citizens do to counter creationists' successes?

Educators can do the following:

1. Resist lawmakers' efforts to dictate curriculum. While many views are needed to suggest curriculum directions, professional educators, not special interest groups, **must** finally use the best pedagogical criteria to determine courses to be taught and textbooks to be used. If educators lose this right, **they** lose their reason for being, they lose everything.

2. Have ready access to the **legal** directives guiding state and local school units in teaching about religion or other controversial topics. Most states have such school laws. If educators and concerned citizens think their state school laws are not sufficiently helpful in this regard, such laws should be changed to protect public schools from political and special interest pressures.

3. Whether or not such state laws exist and particularly where wide local latitude is permitted, educators need to be prepared for inevitable political pressures by organizing and keeping active a

committee on teaching controversial topics. Such a "Procedures Committee" can help set directions, procedures, and policy, and also receive, listen to, and help resolve complaints on censorship, religion, and related controversies in public schools, including creationism.

An active Procedures Committee made up of teachers, parents, and others can do the following:

a. A Procedures Committee can start and maintain a library of materials bearing on the teaching of controversial subjects.

b. Such a library can include information from (and the names and addresses of) organizations from which to secure information about school laws (state attorney general, ACLU, others); where to get other educational help (National Education Association, American Federation of Teachers, American Library Association, others); where to get help on scientific matters (National Association of Biology Teachers, American Association for the Advancement of Science, others).

c. A Procedures Committee maintaining an appropriate library collection would know that the National Association of Biology Teachers (NABT) has a legal defense fund to help science or other teachers with legal problems related to a local school creation-teaching controversy. NABT also published an invaluable A Compendium of Information on the Theory of Evolution and the Evolution-Creation Controversy, Jerry P. Lightner, ed., revised February 8, 1978, 118 pp., $5, and since December 1980 has published a quarterly newsletter reporting evolution/creation controversy news, Scientific Integrity, $5. Another excellent quarterly journal that critically reports on creationist activities is: Creation/Evolution, P. O. Box 5, Amherst

Branch, Buffalo, N. Y. 14226.

d. A Procedures Committee's library can include policy statements from educational and scientific organizations on the evolution/creation controversy, a few of which follow:

American Association for the Advancement of Science:

> Statements about creation that are part of the many religions have no place in...science and should not be regarded as reasonable alternatives to scientific explanations for the origin and evolution of life.[48]

Academic Senate of the University of California:

> We believe that the teaching of special creation should be avoided entirely in California public schools....The State Board of Education [should] reject inclusion of special creation in State-approved science textbooks.[49]

National Education Association:

> [We oppose] the teaching of creationism, the Bible version of how life began, as a mandatory part of the school curriculum, as it violates teacher and student rights.[50]

The Iowa Council of Science Supervisors:

> The science teachers of Iowa reject further consideration of scientific creationism as an alternative approach to established science teaching practices.[51]

New York Academy of Science:

> 'Scientific Creationism' is lacking in scientific substance; we reject it for inclusion in science curricula.[52]

American Jewish Congress Commission on Law and Social Action:

> Scientific creationism, in all of its varied forms, is, at heart, a religious doctrine and all attempts to legitimatize it as a competing scientific theory must be rejected as sham.[53]

Minnesota State Department of Education:

> The forced inclusion of religious beliefs paralleling the theory of evolution in the curriculum is not legal because that teaching is a violation of the concept of the separation of church and state.[54]

e. A Procedures Committee would know about and maintain communications with a nearby "Committee of Correspondence," organized independently in recent years in 47 states. Composed of volunteers--biology teachers, other scientists and educators, ministers, and interested citizens--they monitor mainly creationist pressures on local public schools and school boards. Informal contact among these committees is maintained by the Iowa Academy of Science Panel on Controversial Issues, Stanley Weinberg, Coordinator, 156 East Alta Vista, Ottumwa, Iowa 52501, Telephone (515) 682-7321.

f. Finally, a Procedures Committee, when it sets its goals, can give priority to ongoing collecting of relevant literature and to planning discussions and programs that acquaint members and especially community opinion leaders with case studies and strategies used by extremist pressure groups.

An optimistic view of the evolution/creation controversy is that more scientists, educators, clergymen, and other citizens now oppose equal-time evolution/creation teaching; that creationists are a small part of the diverse conservative spectrum among whom serious divisions exist; that creationists and Moral Majoritarians cannot win in court, public opinion, or among old-line political conservatives on single issues such as prayer in public schools and equal-time evolution/creation teaching.

What course will prevail depends on our faith in time-honored constitutional safeguards, on recalling dangers that state-enforced curriculum and morality pose to liberty and progress, and on believing that religion and ethics at home and in church are as desirable to assure freedom as are unfettered science and critical thought in public schools. In short, the outcome depends, as always, on the good sense of the American people.

DIRECTORY[55]

AAAS American Association for the Advancement of Science, 1515 Massachusetts Avenue N.W., Washington, D.C. 20005; telephone (202) 467-4400.

ACLU American Civil Liberties Union, 132 West 43rd Street, New York, N.Y. 10036; telephone (212) 944-9800. (ACLU has offices in each state and has three regional offices).

ASA American Scientific Affiliation, P.O. Box 862, Elgin, Ill. 60120; telephone (312) 697-5466.

BSA Bible-Science Association, 2911 East 42nd Street, Minneapolis, Minn. 55406; telephone (612) 724-1883.

BSCS Biological Sciences Curriculum Study, 833 W. South Boulder Road, Louisville, Colo. 80027; telephone (303) 666-6558.

CHC Christian Heritage College, 2100 Greenfield Drive, El Cajon, Calif. 92021; telephone (714) 440-3043.

CRS Creation Research Society, 2717 Cranbrook Road, Ann Arbor, Mich. 48104; telephone (313) 971-5915.

CSRC Creation-Science Research Center, 2716 Madison Avenue, San Diego, Calif. 92116; telephone (714) 440-2443.

ICR Institute for Creation Research, 2100 Greenfield Drive, P.O. Box 2666, El Cajon, Calif. 92021; telephone (714) 440-2443.

NABT National Association of Biology Teachers, 11250 Roger Bacon Drive, #19, Reston, Va. 22090; telephone (703) 471-1134.

NSF National Science Foundation, 1800 G Street N.W., Washington, D.C. 20550; telephone (202) 655-4000.

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24. Engel v. Vitale, 370 U.S. 421 (1962); Abington School District v. Schempp, 374 U.S. 203 (1963).

25. An update of Seventh Day Adventist and self-educated geologist George McCready Price's The New Geology, 1923, which credited the Biblical flood instead of evolution with causing the earth's geological formations.

26. With other creationists, she led in getting California's science guidelines to include equal time evolution/creation teaching during 1969-74.

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28. Bates, op. cit., p. 78.

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31. "Creation Trial: Old South Against New," New York Times, December 13, 1981.

32. Letter, David Kraus to Franklin Parker, January 6, 1982. The California Segraves trial referred to occurred March 1-5, 1981, when CSRC Director Kelly Segraves claimed violation of his three children's religious freedom because they were taught evolution dogmatically without a competing divine origin view. The media-heralded "Scopes Trial II" never wrestled with the larger constitutional issues, as did the ACLU challenge trial in Arkansas (December 1-9, 1981), because Segraves early narrowed his complaint to the "evolution taught dogmatically" issue.

Sacramento Superior Court Judge Irving H. Perluss on March 6, 1981, rejected Segraves' equal time request but pleased creationists by ordering wider distribution of California School Board's 1973 statement that evolution be taught as theory, not fact. Segraves claimed this victory as an "opening wedge that eventually will get creationism into science classes and evolution out." ("Creationists Limit Dogmatic Darwinism," American School Board Journal, May, 1981, pp. 17-18). A trial observer claimed that Segraves got for CSRC what he and other creationists wanted, "enormous publicity...[and] the stamp of legitimacy." (Siegel, Harvey, "Creationism, Evolution, and Education: The California Fiasco," Phi Delta Kappan, Vol. 63, No. 2, October, 1981, pp. 95-101). Said Segraves' lawyer Richard K. Turner, former legal aide to the then Governor Reagan, "We basically got what we wanted. We can fight other battles tomorrow." Mrs. Nell Segraves (Kelly Segraves' mother and a founder of CSRC) said, "We have a lot to undo. Creation/evolution is only the beginning." Broad, op. cit.

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failed and, heavily in debt, he allegedly took $130,000 from the family insurance business. After charges were brought late in 1981, he resigned from the Arkansas Senate early in 1982 rather than face trial. Chicago Tribune, December 7, 1981; Washington Post, December 14, 1981, p. A3.

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